

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004506**Date Inspected:** 30-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 30**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Chen Chin Chien, Huang Wen Pan			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	OBG		

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Ken Jobes, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, to randomly monitor welding and Quality Control (QC) functions. While on site, the QA Inspector observed and/or discovered the following:

**OBG Sub-Assembly Shop – Bay 1**

The QA Inspector observed that a short three-rib deck plate was being fit-up and tacked. No identification had yet been assigned to it. The fitting of the Production Monitoring Test (PMT) for the next day's work was observed as well as miscellaneous grinding and drilling.

**OBG Sub-Assembly Shop – Bay 3**

The QA Inspector observed the fitting of T-stiffeners on side plate SP616-001. The welding procedure (WPS) being used was WPS-B-P-2112-3 for shielded metal arc welding (SMAW). The tacking was being done in the horizontal fillet (2F) welding position using TL508 (E7018) electrodes as specified on the WPS. There were three welders being used; Xiao Kin (I. D. No. 049485), Sun Suo Wen (I. D. No. 048920), and Wang Hong Bo (I. D. No. 203206). The QA Inspector verified the qualifications of the three welders for the work they were performing and observed that three portable electrode ovens were in use.

The QA Inspector also observed the grinding of intermittent fillet welds joining T-stiffeners to side plate SP576-001.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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The QA Inspector observed the intermittent fillet welding of T-stiffeners on side plate SP368-001. The welding procedure (WPS) being used was WPS-B-P-2112-3 for shielded metal arc welding (SMAW). The welding was being done in the horizontal fillet (2F) welding position using TL508 (E7018) electrodes as specified on the WPS. There were two welders being used; Xiao Di (I. D. No. 203204) and Shi Wei (I. D. No. 053859). The QA Inspector verified the qualifications of the two welders for the work they were performing and observed that two portable electrode ovens were in use. Certified Welding Inspector (CWI), Chen Chin Chien (CWI No. 03110701) was present during this welding.

### OBG Sub-Assembly Shop – Bay 4

The QA Inspector observed the preheating of three diaphragm plates in preparation for welding and miscellaneous grinding and burning. No welding was observed.

### OBG Sub-Assembly Shop – Bay 7

The QA Inspector observed the flux cored arc welding (FCAW) of Weld No. FB003-070-105, using WPS No. WPS-B-T-2233-B-U2-F in the flat groove (1G) welding position. The welder was Liu Kaige (I.D. No. 044836). Certified Welding Inspector (CWI), Huang Wen Pang (CWI No. 02080501) was present during this welding. The QA Inspector verified the qualifications of the welder and that the electrode classification and diameter, voltage, amperage, travel speed were within the ranges specified on the WPS.

### OBG Sub-Assembly Shop – Bay 8

The QA Inspector observed burning of bevels and grinding on diaphragm plates and miscellaneous grinding and burning. No welding was observed.

All above observations appeared to meet the requirements of the job specifications.

### Summary of Conversations:

As identified within the contents of this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann (1500219953) China, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Jobes, Kenneth	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon, Albert	QA Reviewer

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